

User Instructions NOAQ Boxpool BP52 & BP102

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A NOAQ Boxpool is a temporary pool for storing various types of liquids and dry materials. Clean water, contaminated water, extinguishing water in case of fires, contaminated dredged materials, etc. It can also be used to temporarily store dry materials, such as shavings, chips, pellets, etc.

The Boxpool is available in two sizes, BP52 which is half a meter high and BP102 which is one meter high. Both can be filled with liquid right up to the top edge.

A Boxpool is built up from the same components ("boxes") as NOAQ Boxwall, our mobile flood barrier, which means that the same system can be used for two completely different purposes.

There are two different types of boxes, straight boxes and corner boxes. Corner boxes are available for both internal and external corners. Both are angled 30°. For a Boxpool, mainly internal corner boxes are used. With 3 connected corner boxes you get a 90-degree angle, with 12 corner boxes you get a circle. However, by inserting straight boxes between the corners, you can create a pool of any size and by covering the pool with a special pool cloth/ liner, it becomes completely water/liquid tight.



Two Boxpools side by side – a BP102 and a BP52

Overview

Boxpools can thus be created in any size and shape. You can start from the volume you need, the maximum available width or length of the available surface, or the shape of the surface. To give some guidance before the choice, we have specified some standard models, see below. The final number of the designation indicates the approximate volume for the models in question. Keep in mind that it can be good to have a little flexibility in size, to avoid the liquid spilling over. Such a margin may also be needed if the ground is not completely horizontal, but slightly inclined.

NOAQ Boxpool BP52			
Technical specifications	BP52-1	BP52-8	BP52-38
Height	50 cm	50 cm	50 cm
Length x width	2 x 2 m	10 x 2 m	22 x 4 m
Volume	1 m ³	8 m ³	38 m ³
Corner + straight boxes	12 + 0	12 + 18	12 + 48
Material boxes	ABS, PP		
Material liner	PE 0,18 mm		
NOAQ Boxpool BP102			
Technical specifications	BP102-9	BP102-35	BP102-115
Height	100 cm	100 cm	100 cm
Length x width	3,6 x 3,6 m	11,7 x 3,6 m	23,4 x 5,4 m
Volume	9 m ³	35 m ³	115 m ³
Corner + straight boxes	12 + 0	12 + 18	12 + 48
Total weight boxes + liner	162 kg	456 kg	950 kg
Material boxes	PP		
Material liner	PE 0,18 mm		

To build a NOAQ Boxpool, the same components are used as for the NOAQ Boxwall. There is a separate user manual for this product.



Follow these simple steps for building a Boxpool:

1. Choose a suitable location for the box pool

The Boxpool should be built on a relatively smooth and even surface. An asphalt or concrete surface is ideal, but a gravel or grass field also works well. The smallest Boxpool requires an area of 2 x 2 meters. If you need to build a larger Boxpool, you can either adapt it to the area that is available or find an area that is large enough to accommodate the Boxpool you need.

For both BP52 and BP102, it is possible to create long narrow Boxpools with a width of just under 4 metres. They can therefore be built up on one lane of a normal two-lane country road. This allows you to keep the other lane open for passing traffic. If you need additional storage volume, it is easier to build up several Boxpools, rather than to make the individual pools larger.

For a completely sealed Boxpool (with liner), it is the liner width that limits the width of the Boxpool. For a BP52, the liner needs to be about 1.5 meters wider than the Boxpool itself to reach right up to the edges, with a little margin. For a BP102, the liner needs to be approx. 2.5 meters wider. The same, of course, also applies to the Boxpool's length measurements. If you need a wider Boxpool, however, it is possible to weld several canvases together.



2. Place the boxes down and connect them one by one.

Start from the left (seen from the outside of the prospective Boxpool) and connect one box at a time to the previous one. The boxes have a coupling mechanism (at the front edge) and a locking mechanism (at the top edge). Angle the box slightly forward and connect with the previous box by inserting the protruding "tongue" (farthest left) under the "bridge" (farthest right of the previous box).

Now tilt the box slightly to the side, press down on its rear edge and insert the protruding pin of the locking mechanism into the groove on the previous box. Feel free to hold the slope of the box with the help of your right foot (see the middle picture above) to be able to use both hands for the connection. Set the box down so that the pin ends up in the middle of the groove. This is the normal mode. The straight boxes now fit together in a straight line and the corner boxes fit together at a 30° angle. However, the locking mechanism has a certain flexibility, so that, if necessary, the boxes can be turned up to $+/-3^{\circ}$ towards each other (for BW52) or $+/-2^{\circ}$ (for BW102).









Assembly position

2° or 3° in one direction

Normal position

2° or 3° in the other direction

3. Let the boxes form a closed shape

The smallest Boxpool consists of 12 corner boxes that are connected to form a circle. If you divide such a circle into two halves and insert a number of straight boxes, you only get an oblong basin, but if you divide the circle into four parts and insert straight boxes on the second section as well, you can also make it wider. However, there is nothing that prevents you from inserting any number of boxes in any section of the Boxpool, as long as you finally get a closed shape once all boxes are connected together.



4. Cover the Boxpool with a liner

To make the Boxpool water/liquid tight, you can cover it with a liner. These are available in ready-made formats for the standard models on p. 2. For Boxpools in other formats, it is important to remember that the liner must be wide enough to not only cover the bottom and sides of the pool, but also provide a substantial excess. This is needed so that the liner can follow the shape of the boxes on the inside of the Boxpool without being stretched, as well as allowing a certain overhang that can be fixed along the top edge with the supplied clamps. The liner therefore needs to have a certain minimum length as follows:

The length of the canvas = (the length of the Boxpool x 1.2) + (the height of the Boxpool x 2.5). Of course, the same also applies to the width of the liner.

For a 10 meter long and 4 meter wide Boxpool BP52, a liner is therefore needed with a length of $10 \times 1.2 + 0.5 \times 2.5 = 13.25$ m, and a width of $4 \times 1.2 + 0.5 \times 2.5 = 6.05$ m.

For an equally sized Boxpool BP102, a liner is needed with a length of $10 \times 1.2 + 1 \times 2.5 =$ 14.5 m and a width of $4 \times 1.2 + 1 \times 2.5 =$ 7.3 meters.

Fix the liner along the upper edge of the boxes using the supplied clamps. This is to keep the liner in place, while the pool is empty or half-filled, so that the liner does not blow down (or away). Once the Boxpool is filled, the liner is held in place against the walls by the liquid pressure (ie. the weight of the liquid pushing down).

One clamp per box is enough, which means that these will sit at a distance of 90 cm. But here it is important to give the liner the excess it needs. Therefore, measure out 18 - 20 cm of extra fabric between the clamps.

5. Leave a small gap...

The lower Boxpool BP52 can easily be stepped in and out while building it up. It is significantly more difficult with the metre-high BP102. It is precisely for this reason that a person may need to help during the assembly, especially when putting the last boxes together. This person may then have difficulty getting out. However, if you intend to cover the pool with a liner, there is a smart solution.

Do not connect the last box with the first one, but instead leave a small gap. This allows the person building the Boxpool from the inside to squeeze through the gap as it will then be covered by the liner.



6. Applications

A NOAQ Boxpool has many uses. It can be used as water reservoirs for firefighting, as well as to take care of contaminated extinguishing water that must not be released into nature or contaminate the stormwater system.



It can even be used for direct fire extinguishing kits, for example in electric car fires. By building a box pool around the car, and filling the pool with water, the batteries can be cooled down and kept cool. A re-ignition can thus be avoided.



There are several other situations when a NOAQ Boxpool can come in handy:

- For disposal and temporary storage of environmentally hazardous liquids
- For disposal and dewatering of sludge
- For temporary storage of shavings, chips, ash, grain, animal feed, etc.
- As an additional basin for fish farms
- For various public events

7. After use

Disconnect the boxes by tilting the right box (the one with the pin) towards the left, and lift apart and away.

If necessary, the boxes are rinsed clean with an ordinary water hose, and set aside to dry. By placing the box on its side, the water drains faster from the pores of the sealing strip. If there is a risk of sub-zero temperatures, the boxes must be brought inside and stored in a heated space until all the "soft parts" have had time to dry properly.

Inspect all soft parts. Any damaged or worn sealing strips can be replaced, but if the soles have major damage, the entire box must be replaced.

The boxes are stacked in order to take up as little space as possible during transport and storage.



8. Handling

The boxes fit into each other, which means that they take up very little space. For the smaller Boxpool model (BP52), the boxes are delivered on regular standard pallets 80 x 120 cm. For the larger Boxpool model (BP102), the boxes are normally delivered in plywood cases with the dimensions $2.15 \times 1.47 \times 1.14$ meters, see picture above.

The BP102 case drawers open from the front. With the help of the tool (located on the front of the box) you loosen the 20 green clips that hold the front and the lid in place. Use gloves! The boxes can then be easily lifted or pulled out. Remember how the boxes were placed so you can put them back the same way after use. Take a photo!

The green clips between the short sides of the box and the back do not need to be loosened. These clips are preferably left in place in order to hold the remaining sides of the case together until it is time to repack the boxes.

The cases can be stacked on top of each other to further reduce the storage space required.